INTERNET TOOLS for Planning, Conservation & Environmental Protection

In an effort to increase awareness of web-based resources available to local governments and citizen planners, Wisconsin Department of Natural Resources (WDNR) has initiated a technical assistance program focused on Internet tools for planning, conservation, and environmental protection. This program has been made possible by a water quality management grant awarded to the WDNR by the U.S. Environmental Protection Agency (EPA).

As part of our technical assistance program we are writing articles that highlight an Internet tool, discuss its possible uses, and offer step-by-step tutorials. It is our hope that the information provided here will insure that all involved in local planning processes have equal access to valuable information and analysis tools. Gaining access to these free web-based planning tools will assist communities with preliminary selection of alternative approaches to watershed and community planning. When community planners, developers, and citizens have access to similar information they are more readily able to interact and jointly discover possible solutions to land use issues.

Additional articles can be found online at **http://dnr.wi.gov/org/es/science/landuse/CompTools/local.htm**

Web Soil Survey

Recently, Wisconsin joined a handful of states in which a complete soil survey has been conducted for all counties. Soil surveys provide a field-based scientific inventory of soil resources, including soil maps, data about the physical and chemical properties of soils, and information on the potentials and limitations of each soil. Soil surveys are used for selecting sites for development, road building, pipeline corridors, and waste disposal; for minimizing risks to human life and property; and for wildlife management, wetlands identification, and soil or water conservation.

Web Soil Survey (WSS) is an Internet tool for finding and accessing soil survey data from the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS). By providing electronic access to full soil survey report content, WSS is an alternative to the traditional hardcopy publication and a means for quicker delivery of the most current soil data.

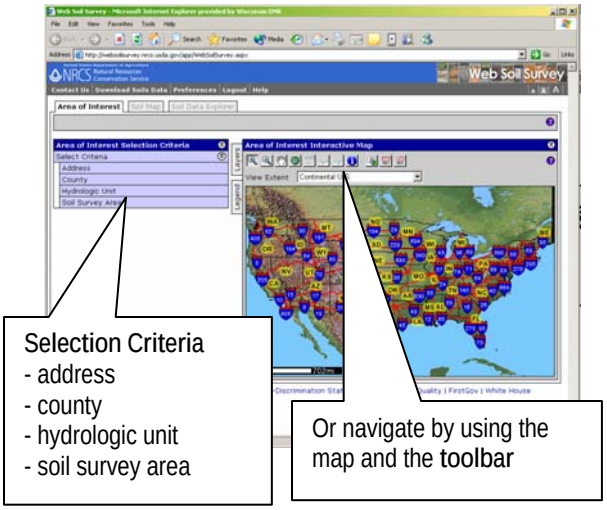
Whether you are an engineer or scientist working in a local government agency, a NRCS field employee, or a citizen interested in discovering more information about soil on your property, WSS was developed to be both a powerful yet easy-to-use analytical tool. Through WSS, users have the ability to learn the terminology and concepts of soils and specific land uses, view interpretive soil data and soil properties in the form of thematic maps, tables, and text descriptions, and access ecological site information. This relevant soil and related information can help people make well-informed land use decisions.

To Use Web Soil Survey

Go to **http://soils.usda.gov/survey/** from any Internet browser. Three basic steps make WSS a simple yet powerful way to access and analyze soil data.

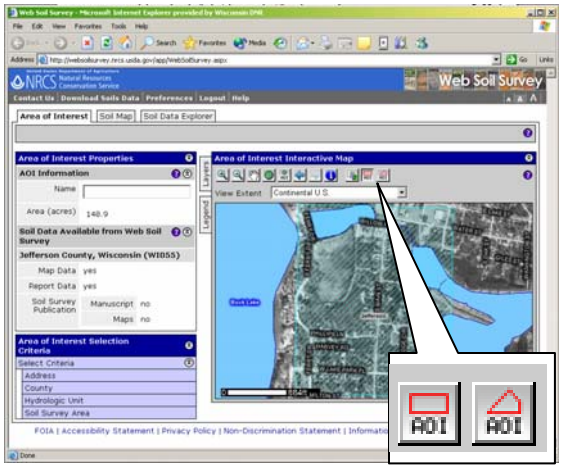
1. Define an Area of Interest

The first step in using WSS is to define your area of interest (AOI), or the geographical region for which you want soils information. You can navigate to your AOI and define it using either the Selection Criteria in the left column or the interactive map to the right. You can zoom to an area by drawing a box on the map or by selecting from a choice list.



Navigate the map using the quick buttons along the toolbar. Holding the cursor over a button brings up information about what the button does.

Note: You must specifically set the AOI before proceeding to view soils maps or data. You can set the AOI by using one of the AOI buttons on the toolbar or you can chose a Soil Survey Area and then click on the Set AOI button; the two AOI buttons let you define your AOI as a rectangular area or a custom polygon. Once you've set your AOI the column on the left will show information about the AOI, including what types of soils data are available; the map will show the AOI as the shaded region.

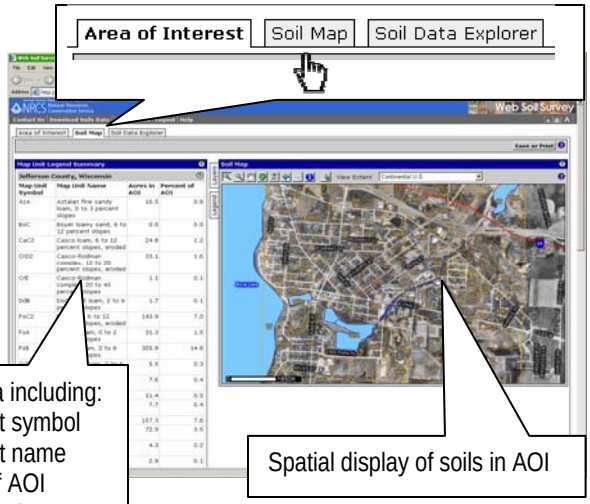


After defining your AOI you can create a custom name for the specified area.

2. View Soils Data

The next step of WSS allows you to view soils data and a related map for your defined AOI. Use the tabs at the top of the display to switch to the soil map and data.

WSS displays a table containing the soils data located within the AOI. For each soil the table shows its total acreage and percentage of the AOI. The map displays a spatial distribution of the soils.



Soils data including:
- Map unit symbol
- Map unit name
- Acres of AOI
- Percent of AOI

Spatial display of soils in AOI

You can print or save your map and table by clicking <Save or Print> located at the top left of the map. This converts the information to a PDF document that can be printed or saved to your computer.

3. Explore Soils Data

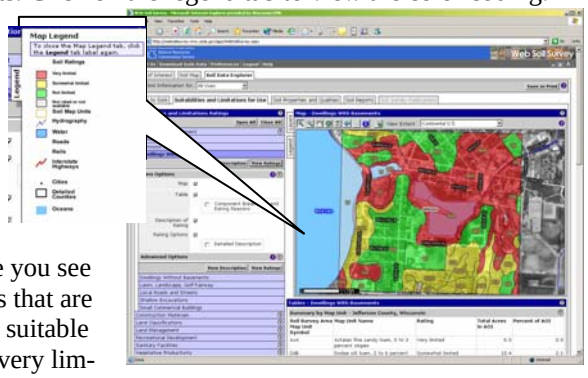
The final step of WSS, the Soil Data Explorer, provides a broad range of information about soils and specific information about the suitabilities and limitations for your defined AOI. The Soil Data Explorer lets you analyze your AOI in the context of the exploration tabs shown here. You can also generate Soil Reports and Soil Survey Publications.

Intro to Soils
- Soils 101
- Information for Land Users
  - Homebuyers
  - Land Use Planners
  - Appraisers
  - Developers

Soil Properties and Qualities
- Soil Chemical Properties
- Soil Erosion Factors
- Soil Physical Properties
- Soil Qualities and Features
- Water Features

Suitabilities and Limitations
- Building Site Development
- Construction Materials
- Land Classifications
- Recreational Management
- Sanitary Facilities

This Map is an example of exploring the Suitabilities and Limitations for Building Site Development. The map displays a rating of the suitability of dwellings with basements. Click on the legend tab to view the color coding.



Here you see areas that are both suitable and very limited for this kind of development. These maps can also be printed and saved as PDF documents.

For More Information:

WDNR's land use website
www.dnr.state.wi.us/org/es/science/landuse

Midwest Spatial Decision Support System Partnership
www.epa.gov/waterspace

Article prepared by Dan Bellrichard
daniel.bellrichard@dnr.state.wi.us
Bureau of Integrated Science Services
Wisconsin Department of Natural Resource
PO Box 7921, Madison, WI 53707-7921

WISCONSIN DEPT. OF NATURAL RESOURCES